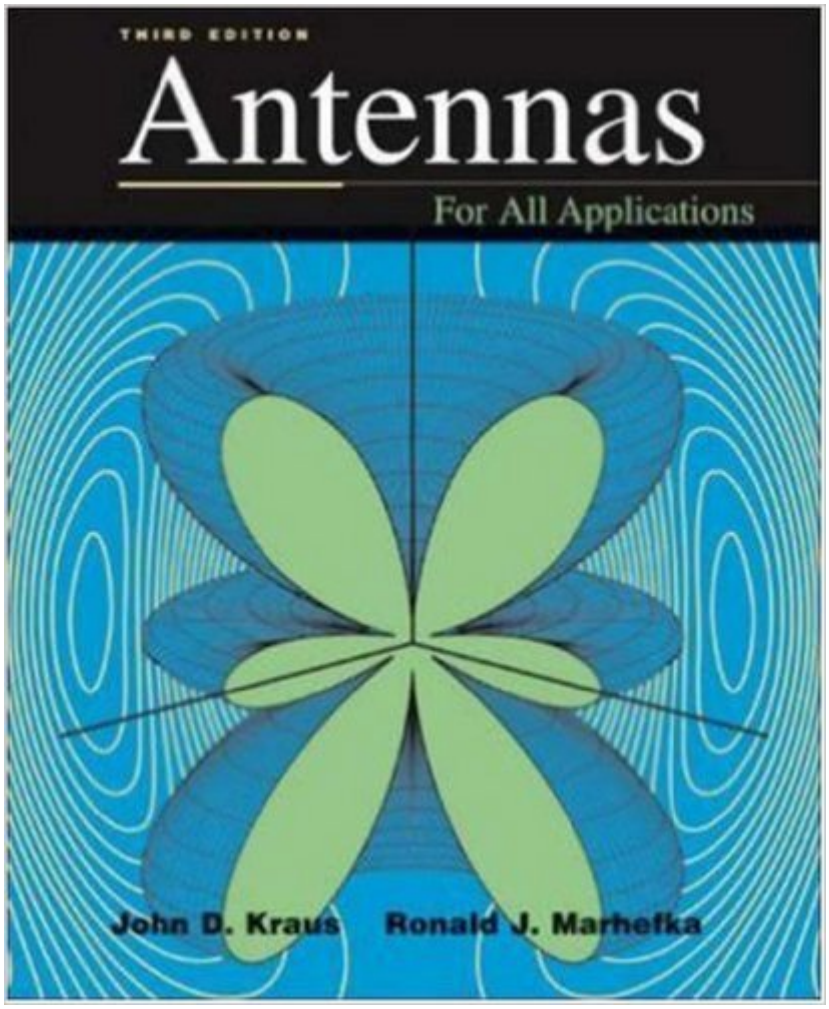
Antennas For All Applications



Synopsis

This is an exciting revision of John Kraus' classic book Antennas, which has been long known as the "Antenna Bible". A new co-author, Ronald Marhefka has joined the author team for this revison. Many new, modern applications have been added-thus the title change to Antennas with All Applications. As well, the references have been updated to include recent additons to the literature. Additionally, the book has been reorganized to make it more user-friendly for both students and professionals. The book now covers the fundamentals of various antennas and concepts in the first half of the book and then gets into more details on those same topics later in the book. This allows a one-semester course to just cover the fundamentals if desired, and a professional to focus on advanced topics if he or she wants.

Book Information

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Best Sellers Rank: #2,086,217 in Books (See Top 100 in Books) #76 inÂ Books > Engineering & Transportation > Engineering > Telecommunications & Sensors > Antennas #176 inÂ Books > Engineering & Transportation > Engineering > Telecommunications & Sensors > Radar #1449 inÂ Books > Science & Math > Physics > Electromagnetism

Customer Reviews

From fundamental antenna concepts to the characteristics and design curves for all sorts of practical antennas, this book is a must have for anyone having anything to do with antennas. It is clearly written, contains excellent diagrams, interesting photographs of historical significance, and the author's personal account of his discoveries and contributions to this field.

This book covers all the basics of antenna theory; including radiation mechanisms, antenna parameters, and theory of fundamental elements such as dipoles, loops, slots, helicals, and arrays. The material is presented logically in an easy-to-read format which allows the reader to understand

and apply the design concepts to antenna problems of today. A 'must-have' text for the RF or Antenna Design Engineer.

I would normally rate such a book as five stars, but I've given it four stars to draw some attention that this book is not so easily comprehended as two preceding reviewers suggest. Indeed, the book is well written and organized. However, I think the level of mathematics used is that of advanced calculus. I believe this book is intended for a senior EE or EE graduate student. However, it is not all mathematics and there is still much to be learned about antennas from the book without having had exposure to some of the mathematics used. If you are in doubt, you might consider an alternative before purchasing this book, or at least purchase it with the thought of returning it within a 30 day inspection period.

We had this as a reference book for a course in Microwave engineering and was used in a design problem. This is not your leisure book that you can just browse! You have to have advanced calculus/electromagnetism background to understand the concepts.The book covers all the basic antennae theory and types to topics ranging to radar design.This is a must have for any RF design engineer.Since most of the RF jobs in US are with defense and companies like Lockheed Martin and you have to be US citizen to get such jobs, I had to opt for computer networks for graduate studies in US, otherwise I'd have ended up as a RF designer myself.

Everything is derived. My calculus knowledge is a bit rusty after all these years, but I appreciate the high level of the math and writing. I plan to use some of his original work in Helical antennas as described in the book. I can't think of a better vote for it.His Ham call was W8JK, I am W6JWN

I had lost my copy of this book in a fire. It had been my bible for antenna basic reference book for years, especially for helical antennas. It is a most welcome addition to my rebuilding of my reference library. John D. Kraus' book is one of the books I recommend for any engineers or hobbyist antenna reference library.

John D. Kraus was my mentor in grad school. His ability to communicate as seen in the first edition of the book (1950 - Antennas) is still the standard and is directly what led me to OSU grad school. Advanced students should not only have this third edition, but should work to find a copy of the first edition too. As indicated, the third edition is strong on applications - something not available in many

other antenna related books.

I found some aspects of the text, especially chapters 6, 13 and 14, to be problematic. I thought the approach to the exposition of the theory of a given topic to be somewhat choppy. Much text is devoted to finding simplified expressions which can be distracting and impedes understanding. In a few instances, the reader is directed to external sources to get foundational details. And, often, the result presented applies only in special cases, such as, in the far field, or for electrically small antennas, or for antennas an odd integer multiple of a half wavelength. For example, in the section on self-impedance of a thin linear antenna (13-5), the statement is made that it is "common practice to shorten the antenna a few percent to make X11=0." Yet the expression presented for X11 is the sine integral which is non-zero everywhere except at Si(0). So, absent thorough exposition of the theory, this is not helpful to those interested in the general case.I believe this book would be vastly improved if a systematic approach, in the context of electromagnetic theory, is adopted for exposition of the material. Development of new topics should begin with first principles. Sections building on earlier sections should include appropriate back references. References to external papers or earlier editions should not be used as substitute for exposition of details as these sources are generally inaccessible to the reader. Recognizing the accessibility of powerful mathematics software, much of the material dealing with simplifying assumptions could be edited out in favor of more complete exposition of the theory.

Analysis, Synthesis, BFNs and Active Array Systems